Dear Sir:

An interesting case study of a patient with acute leptospirosis who displayed severe hypomagnesemia and required large doses of magnesium replacement during the acute phase was recently published in the American Journal of Tropical Medicine and Hygiene.1 We concur with the authors’ observation that magnesium imbalance in leptospirosis has for the most part been neglected in the literature. We would extend this observation and suggest that serum magnesium concentration has been under-used by the leptospirosis and medical communities, given that magnesium levels may affect mental status and that altered mental status in leptospirosis is a poor prognostic indicator.2,3

In a review of the serum magnesium status in 240 leptospirosis patients at the World Health Organization/Food and Agriculture Organization/World Organization for Animal Health Collaborating Center for Reference and Research on Leptospirosis, we found that 13 of the 240 patients (5.4%) had their serum magnesium status determined from their first sample at initial presentation. Nine of the 240 patients were admitted to an intensive care unit with severe leptospirosis, four of which had their serum magnesium status measured in their first sample at initial presentation. Interestingly, two patients who had their serum magnesium status determined from their first sample also had hypomagnesemia and hypoalbuminemia. In addition to the low serum magnesium, the lower serum albumin is of interest because albumin has been shown to be a protective factor against the toxic leptospiral-derived fatty acids that inhibit kidney sodium-potassium ATPase.4 Furthermore, it has also been reported that a low level of albumin at admission is a significant predictor of mortality in trauma patients.5

These observations suggest that there is significant value in determining the serum magnesium status in patients in whom leptospirosis is suspected, and that there is a need to investigate the clinical utility of albumin in the treatment of acute leptospirosis. Further research is also required to determine the ability of different leptospiral serovars to induce hypomagnesemia and under what conditions this may occur.

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REFERENCES